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RAW SEQUENCE LISTING                      DATE: 04/26/2001  
PATENT APPLICATION: US/09/724,481              TIME: 10:25:22

Input Set : N:\Crf3\RULE60\09724481.txt  
Output Set: N:\CRF3\04262001\I724481.raw

## SEQUENCE LISTING

3 (1) GENERAL INFORMATION:  
5     (i) APPLICANT: Clark, Ross G1  
6                      Lowman, Henry B.  
7                      Robinson, Iain C.A.F.  
9     (ii) TITLE OF INVENTION: Insulin-like Growth Factor Agonist Molecules  
11    (iii) NUMBER OF SEQUENCES: 109  
13    (iv) CORRESPONDENCE ADDRESS:  
14            (A) ADDRESSEE: Genentech, Inc.  
15            (B) STREET: 1 DNA Way  
16            (C) CITY: South San Francisco  
17            (D) STATE: California  
18            (E) COUNTRY: USA  
19            (F) ZIP: 94080  
21    (v) COMPUTER READABLE FORM:  
22            (A) MEDIUM TYPE: 3.5 inch, 1.44 Mb floppy disk  
23            (B) COMPUTER: IBM PC compatible  
24            (C) OPERATING SYSTEM: PC-DOS/MS-DOS  
25            (D) SOFTWARE: WinPatin (Genentech)  
27    (vi) CURRENT APPLICATION DATA:  
C--> 28            (A) APPLICATION NUMBER: US/09/724,481  
C--> 29            (B) FILING DATE: 28-Nov-2000  
30            (C) CLASSIFICATION:  
32    (vii) PRIOR APPLICATION DATA:  
33            (A) APPLICATION NUMBER: 09/052,888  
34            (B) FILING DATE: 31-Mar-1998  
37    (viii) ATTORNEY/AGENT INFORMATION:  
38            (A) NAME: Hasak, Janet E.  
39            (B) REGISTRATION NUMBER: 28,616  
40            (C) REFERENCE/DOCKET NUMBER: P1071P1  
42    (ix) TELECOMMUNICATION INFORMATION:  
43            (A) TELEPHONE: 650/225-1896  
44            (B) TELEFAX: 650/952-9881  
45 (2) INFORMATION FOR SEQ ID NO: 1:  
47     (i) SEQUENCE CHARACTERISTICS:  
48            (A) LENGTH: 21 amino acids  
49            (B) TYPE: Amino Acid  
50            (D) TOPOLOGY: Linear  
52     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 1:  
54    Glu Leu Asp Gly Trp Val Cys Ile Lys Val Gly Glu Gln Asn Leu  
55    1                      5                      10                      15  
57    Cys Tyr Leu Ala Glu Gly  
58                      20    21  
60 (2) INFORMATION FOR SEQ ID NO: 2:  
62     (i) SEQUENCE CHARACTERISTICS:  
63            (A) LENGTH: 21 amino acids  
64            (B) TYPE: Amino Acid

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65      (D) TOPOLOGY: Linear
67      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 2:
69  Trp Phe Lys Thr Val Cys Tyr Glu Trp Glu Asp Glu Val Gln Cys
70  1          5          10          15
72  Tyr Thr Leu Glu Glu Gly
73          20  21
75 (2) INFORMATION FOR SEQ ID NO: 3:
77      (i) SEQUENCE CHARACTERISTICS:
78          (A) LENGTH: 21 amino acids
79          (B) TYPE: Amino Acid
80          (D) TOPOLOGY: Linear
82      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 3:
84  Arg Val Gly Ala Tyr Ile Ser Cys Ser Glu Thr Glu Cys Trp Val
85  1          5          10          15
87  Glu Asp Leu Leu Asp Gly
88          20  21
90 (2) INFORMATION FOR SEQ ID NO: 4:
92      (i) SEQUENCE CHARACTERISTICS:
93          (A) LENGTH: 20 amino acids
94          (B) TYPE: Amino Acid
95          (D) TOPOLOGY: Linear
97      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 4:
99  Val Ala Trp Glu Val Cys Trp Asp Arg His Asp Gln Gly Tyr Ile
100 1          5          10          15
102 Cys Thr Thr Asp Ser
103          20
105 (2) INFORMATION FOR SEQ ID NO: 5:
107      (i) SEQUENCE CHARACTERISTICS:
108          (A) LENGTH: 18 amino acids
109          (B) TYPE: Amino Acid
110          (D) TOPOLOGY: Linear
112      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 5:
114 Ala Trp Glu Val Cys Trp Asp Arg His Gln Gly Tyr Ile Cys Thr
115 1          5          10          15
117 Thr Asp Ser
118          18
120 (2) INFORMATION FOR SEQ ID NO: 6:
122      (i) SEQUENCE CHARACTERISTICS:
123          (A) LENGTH: 15 amino acids
124          (B) TYPE: Amino Acid
125          (D) TOPOLOGY: Linear
127      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 6:
129 Cys Trp Asp Arg His Asp Gln Gly Tyr Ile Cys Thr Thr Asp Ser
130 1          5          10          15
132 (2) INFORMATION FOR SEQ ID NO: 7:
134      (i) SEQUENCE CHARACTERISTICS:
135          (A) LENGTH: 18 amino acids
136          (B) TYPE: Amino Acid
137          (D) TOPOLOGY: Linear

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139      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 7:
141  Glu Glu Ser Glu Cys Phe Glu Gly Pro Gly Tyr Val Ile Cys Gly
142      1              5              10              15
144  Leu Val Gly
145      18
147  (2) INFORMATION FOR SEQ ID NO: 8:
149      (i) SEQUENCE CHARACTERISTICS:
150          (A) LENGTH: 18 amino acids
151          (B) TYPE: Amino Acid
152          (D) TOPOLOGY: Linear
154      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 8:
156  Asp Met Gly Val Cys Ala Asp Gly Pro Trp Met Tyr Val Cys Glu
157      1              5              10              15
159  Trp Thr Glu
160      18
162  (2) INFORMATION FOR SEQ ID NO: 9:
164      (i) SEQUENCE CHARACTERISTICS:
165          (A) LENGTH: 18 amino acids
166          (B) TYPE: Amino Acid
167          (D) TOPOLOGY: Linear
169      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 9:
171  Ser Glu Glu Val Cys Trp Pro Val Ala Glu Trp Tyr Leu Cys Asn
172      1              5              10              15
174  Met Trp Gly
175      18
177  (2) INFORMATION FOR SEQ ID NO: 10:
179      (i) SEQUENCE CHARACTERISTICS:
180          (A) LENGTH: 15 amino acids
181          (B) TYPE: Amino Acid
182          (D) TOPOLOGY: Linear
184      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 10:
186  Ser Glu Glu Val Cys Trp Pro Val Ala Glu Trp Tyr Leu Cys Asn
187      1              5              10              15
189  (2) INFORMATION FOR SEQ ID NO: 11:
191      (i) SEQUENCE CHARACTERISTICS:
192          (A) LENGTH: 15 amino acids
193          (B) TYPE: Amino Acid
194          (D) TOPOLOGY: Linear
196      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 11:
198  Val Cys Trp Pro Val Ala Glu Trp Tyr Leu Cys Asn Met Trp Gly
199      1              5              10              15
201  (2) INFORMATION FOR SEQ ID NO: 12:
203      (i) SEQUENCE CHARACTERISTICS:
204          (A) LENGTH: 12 amino acids
205          (B) TYPE: Amino Acid
206          (D) TOPOLOGY: Linear
208      (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 12:
210  Val Cys Trp Pro Val Ala Glu Trp Tyr Leu Cys Asn
211      1              5              10              12

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213 (2) INFORMATION FOR SEQ ID NO: 13:
215     (i) SEQUENCE CHARACTERISTICS:
216         (A) LENGTH: 18 amino acids
217         (B) TYPE: Amino Acid
218         (D) TOPOLOGY: Linear
220     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 13:
222 Thr Gly Val Asp Cys Gln Cys Gly Pro Val His Cys Val Cys Met
223   1             5             10             15
225 Asp Trp Ala
226           18
228 (2) INFORMATION FOR SEQ ID NO: 14:
230     (i) SEQUENCE CHARACTERISTICS:
231         (A) LENGTH: 18 amino acids
232         (B) TYPE: Amino Acid
233         (D) TOPOLOGY: Linear
235     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 14:
237 Thr Val Ala Asn Cys Asp Cys Tyr Met Pro Leu Cys Leu Cys Tyr
238   1             5             10             15
240 Asp Ser Asp
241           18
243 (2) INFORMATION FOR SEQ ID NO: 15:
245     (i) SEQUENCE CHARACTERISTICS:
246         (A) LENGTH: 15 amino acids
247         (B) TYPE: Amino Acid
248         (D) TOPOLOGY: Linear
250     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 15:
252 Cys Arg Ala Gly Pro Leu Gln Trp Leu Cys Glu Lys Tyr Phe Gly
253   1             5             10             15
255 (2) INFORMATION FOR SEQ ID NO: 16:
257     (i) SEQUENCE CHARACTERISTICS:
258         (A) LENGTH: 19 amino acids
259         (B) TYPE: Amino Acid
260         (D) TOPOLOGY: Linear
262     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 16:
264 Ser Glu Val Gly Cys Arg Ala Gly Pro Leu Gln Trp Leu Cys Glu
265   1             5             10             15
267 Lys Tyr Phe Gly
268           19
270 (2) INFORMATION FOR SEQ ID NO: 17:
272     (i) SEQUENCE CHARACTERISTICS:
273         (A) LENGTH: 400 base pairs
274         (B) TYPE: Nucleic Acid
275         (C) STRANDEDNESS: Double
276         (D) TOPOLOGY: Linear
278     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 17:
281 TCACGTAAAA AGGGTATCTA GAATTATGAT GATTACTCTG CGCAAATTC 50
283 CTCTGGCGGT TGCCGTCGCA GCGGGCGTAA TGTCTGCTCA GGCCATGGCC 100
285 GGTCCCGAAA CTCTGTGCGG TGCTGAACTG GTTGACGCTC TGCACTTCGT 150
287 ATGTGGTGAT CGAGGCTTCC TGTTCACAA ACCGACTGGG GCTGGATCCT 200

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289 CCTCTCGTCG TGCTCCCCAG ACTGGTATTG TTGACGAATG CTGCTTTCGT 250
291 TCTTGCGACC TGCGTCGTCT GGAAATGTAT TGCCTCCCC TGAAACCCGC 300
293 TAAATCTGCT TAGAAGCTCC TAACGCTCGG TTGCCGCCGG GCGTTTTTTA 350
295 TTGTTAACTC ATGTTTGACA GCTTATCATC GATAAGCTTT AATGCGGTAG 400
297 (2) INFORMATION FOR SEQ ID NO: 18:
299     (i) SEQUENCE CHARACTERISTICS:
300         (A) LENGTH: 95 amino acids
301         (B) TYPE: Amino Acid
302         (D) TOPOLOGY: Linear
304     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 18:
306 Met Met Ile Thr Leu Arg Lys Leu Pro Leu Ala Val Ala Val Ala
307   1             5             10             15
309 Ala Gly Val Met Ser Ala Gln Ala Met Ala Gly Pro Glu Thr Leu
310             20             25             30
312 Cys Gly Ala Glu Val Asp Ala Leu Gln Phe Val Cys Gly Asp
313             35             40             45
315 Arg Gly Phe Leu Phe Asn Lys Pro Thr Gly Ala Gly Ser Ser Ser
316             50             55             60
318 Arg Arg Ala Pro Gln Thr Gly Ile Val Asp Glu Cys Cys Phe Arg
319             65             70             75
321 Ser Cys Asp Leu Arg Arg Leu Glu Met Tyr Cys Ala Pro Leu Lys
322             80             85             90
324 Pro Ala Lys Ser Ala
325             95
327 (2) INFORMATION FOR SEQ ID NO: 19:
329     (i) SEQUENCE CHARACTERISTICS:
330         (A) LENGTH: 5115 base pairs
331         (B) TYPE: Nucleic Acid
332         (C) STRANDEDNESS: Double
333         (D) TOPOLOGY: Linear
335     (xi) SEQUENCE DESCRIPTION: SEQ ID NO: 19:
338 GAATTCAACT TCTCCATACT TTGGATAAGG AAATACAGAC ATGAAAAATC 50
340 TCATTGCTGA GTTGTATTAT AAGCTTGCCC AAAAAGAAGA AGAGTCGAAT 100
342 GAACTGTGTG CGCAGGTAGA AGCTTTGGAG ATTATCGTCA CTGCAATGCT 150
344 TCGCAATATG GCGCAAAATG ACCAACAGCG GTTGATTGAT CAGGTAGAGG 200
346 GGGCGCTGTA CGAGGTAAAG CCCGATGCCA GCATTCCTGA CGACGATACG 250
348 GAGCTGTGTC GCGATTACGT AAAGAAGTTA TTGAAGCATC CTCGTCAGTA 300
350 AAAAGTTAAT CTTTCAACA GCTGTCATAA AGTTGTCACG GCCGAGACTT 350
352 ATAGTCGCTT TGTTTTTATT TTTTAATGTA TTTGTAAC TAACGCAAGT 400
354 TCACGTAAAA AGGGTATCTA GAATTATGAT GATTACTCTG CGCAAAC TTC 450
356 CTCTGGCGGT TGCCGTGCGA GCGGGCGTAA TGTCTGCTCA GGCCATGGCC 500
358 GGTCCTCGAA CTCTGTGCGG TGCTGAAC TGTTGACGCTC TGCAGTTCGT 550
360 ATGTGGTGAT CGAGGCTTCC TGTTCACAAA ACCGACTGGG GCTGGATCCT 600
362 CCTCTCGTCG TGCTCCCCAG ACTGGTATTG TTGACGAATG CTGCTTTCGT 650
364 TCTTGCGACC TGCGTCGTCT GGAAATGTAT TGCCTCCCC TGAAACCCGC 700
366 TAAATCTGCT TAGAAGCTCC TAACGCTCGG TTGCCGCCGG GCGTTTTTTA 750
368 TTGTTAACTC ATGTTTGACA GCTTATCATC GATAAGCTTT AATGCGGTAG 800
370 TTTATCACAG TTAATGTGCT AACGCAGTCA GGCACCGTGT ATGAAATCTA 850
372 ACAATGCGCT CATCGTCATC CTCGGCACCG TCACCTGGA TGCTGTAGGC 900

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## VERIFICATION SUMMARY

DATE: 04/26/2001

PATENT APPLICATION: US/09/724,481

TIME: 10:25:23

Input Set : N:\Crf3\RULE60\09724481.txt

Output Set: N:\CRF3\04262001\I724481.raw

L:28 M:220 C: Keyword misspelled or invalid format, [(A) APPLICATION NUMBER:]  
L:29 M:220 C: Keyword misspelled or invalid format, [(B) FILING DATE:]  
L:808 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=23  
L:826 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:24  
L:841 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25  
L:844 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:25  
L:856 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26  
L:859 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:26  
L:871 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:874 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:27  
L:886 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
L:889 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:28  
L:901 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29  
L:904 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:29  
L:916 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30  
L:919 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:30  
L:931 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31  
L:934 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:31  
L:946 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32  
L:949 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:32  
L:961 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33  
L:964 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:33  
L:991 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:35  
L:1016 M:246 W: Invalid value of Alpha Sequence Header Field, [MOLECULE TYPE:], SeqNo=37  
L:1139 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45  
L:1142 M:341 W: (46) "n" or "Xaa" used, for SEQ ID#:45